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Inside the
INTERNET

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Connecting on January 1, 2000

If you want to research the Year 2000 problem, the Internet is the place to go. It's amazingly easy to find hundreds of Web sites with documentation, opinions, and discussions about how the most infamous moment in computer history will (or won't) affect everything from your financial affairs to the chip that regulates the amount of gas your car uses.

But what about the Internet itself? Let's say you get up on the morning (or afternoon) of January 1, 2000 and decide you want to check for updates on your favorite Big Bill Broonzy fan site. What are you going to find? Will the site be there? Will it be a garbled mess? For that matter, will you be able to make a connection to the net?

There's no way to be certain about the answers until the time comes. But we can look at the most likely trouble spots and try to make a guess.

Can Y2K cripple your access?

The first thing, of course, is your connection. Unless your regular voice service has gone out, you shouldn't have any problem here. Since it's a real-time transmission, dates don't enter the picture.

The next thing is data transmission. Internet systems transmit and receive all data according to certain well-defined sets of rules called protocols. The question is whether these protocols can deal with the year 2000 correctly.

The Year 2000 Working Group conducted a study of Internet protocols to address this question. Their working draft, dated July 1998, outlines a few minor issues. But overall, the group's conclusion was that their "investigation discovered little reason for concern with regards to the functionality of the protocols." In other words, the protocols will probably be all right, although this isn't certain.

Cartoon 2000.com provides a humorus look at the professionals wrestling with 42K compliance.

IN THIS ISSUE

ZIFF-DAVIS a SOFTBANK company

We should note here that The Year 2000 Working Group explicitly labeled this report an Internet Draft, with a warning not to use it as reference material because another, more up-to-date document could supersede it at any time. However, the report is probably a fairly accurate picture of the situation at the time, and one can hope that updates will bring even better news. If you want to check it out yourself, visit The Internet Engineering Task Force's Web site at:

www.ietf.org/html.charters/2000-charter.html

Next, we come to the other computers on the network, and this is where it becomes chaotic. You might be sure your own ISP is Year 2000 compliant in every way, but all that gets you is a connection. You're still at the mercy of the computers you're requesting data from—and all the other computers in between.

This is a good news/bad news situation. The good news is that one of the most important design principles behind the Internet is that if part of it goes down, the rest of the network can route around the afflicted area. The bad news is that if the server that hosts your favorite Web site goes down, the site's simply not going to be there.

And if it's there, is it going to work right? If it's just serving up static HTML pages and maybe a few graphics, it'll probably be okay. But features that rely on doing any sort of calculations with dates may be affected. This includes electronic commerce, database access, and even online discussion forums.

The key is that everything has to be Year 2000 compliant: the hardware, operating system, server software, and the application itself. If just one part of this system uses a two-digit date, you could see a problem.

Almost invariably, manufacturers of hardware and software claim their recent products are Year 2000 compliant. And patches are available to bring many older products into compliance.

While we'd never suggest that any of these companies are lying, the interdependence of the various parts of the system make it virtually impossible to be sure of total compliance. To illustrate with an example from the world of PCs, Microsoft claims that Windows 98 is Year 2000 compliant. And it is—but only if your BIOS can recognize that the year 00 should have a 20 rather than a 19 in front of it. And that's something that Microsoft has no control over.

Of course, it makes sense for Internet Service Providers and Web site administrators to do everything they can to make sure the year 2000 dawns uneventfully. Computers are useful and even necessary in other industries, but when it comes to the Internet, computers *are* the industry. Allowing a Y2K problem to interfere with service would be analogous to a truck driver ignoring a clanking sound in his engine.

Unfortunately, decision makers don't always do what makes sense. Even when they try to, they may discover that there simply isn't enough time or money to solve the problem. Or, it's possible, that the person who has to do the work might not be qualified for the job. The upshot is that you just can't be sure what's going on out there.

Finally, you'll need to look at your own system. For ordinary Internet usage, you probably won't have any trouble, but little glitches may appear here and there. For example, there have been reports that in sorting email messages, older versions of Eudora Lite will treat a date stamp of 2000 as if it were 1900.

A victim of its own popularity?

Even if only a few systems connected to the Internet go out of service when the year 2000 begins, we could still encounter a major problem. With new users opening accounts at a rate faster than the network's physical growth, many people are, even now, frequently seeing delays in accessing systems that can't handle the amount of traffic they're getting.

Assume a continued increase in usage over the next year. If Y2K takes as few as 2 percent of the network's computers out of service—even temporarily—this will throw a heavier load onto the surviving systems. In turn, the extra burden could cause some of the Y2K-compliant systems to crash if they were already operating at near capacity.

From here, it would be easy to theorize a ripple effect that would continue until the entire Internet collapsed, but that's not likely. Most users would probably become frustrated over the repeated delays and disconnect, which would lighten the load.

Conclusion

Although it's not realistic to expect the entire Internet to come crashing down at midnight, 1/1/00, don't be surprised if a few things go wrong. The Internet is simply too big, with too many places for Y2K to rear its ugly head, for people to find and fix all of them.

As a user, there's nothing you can do except hope for the best and be prepared for the worst. Just to play it safe, check that Big Bill Broonzy site on New Year's Eve.

Testing for the Y2K bug

By now almost everyone understands the basics of how Y2K (Year 2000) will effect computers around the world. If you need a refresher on the problem, see the sidebar, "*The Year 2000 bug*." In this article, we'll explain how you can test your PC for this problem, and go over some other resources you may find useful.

Who needs to test for the Y2K bug?

If you have a PC that's several years old (a 286, 386, or 486, or if you have a Pentium processor running at 100 MHz or slower), you need to test your system for the Y2K bug. Most people running under an original Windows 95 operating system at over 100 MHz don't need to worry about Y2K, but with some IBM compatible PCs of this configuration, the OEM may have used a RTC chip that was not millennium compliant—which means that operating system's BIOS will pick up an incorrect date after the millennium rollover.

If you have the Windows 98 operating system, you shouldn't have to worry—Microsoft has included an automatic fix with Windows 98.

Likewise, if you are running Windows NT 4 or higher, the operating system has an automatic fix.

Conducting your own Y2K test

You can test your PC for the Y2K bug in just a few minutes with one of the tests we've outlined below. Please remember that before you start a test you'll need to close out of all software programs and disconnect your PC from any network that might reset the date on your PC when you reboot.

The DOS test

- Insert a DOS boot disk (see your OS documentation) into the floppy disk drive and start up your system. At the DOS prompt type *date* and change the date to December 31, 1999 (12-31-1999). Next type *time* and change the time to 11:58PM (23:58). Shut your system down for at least two minutes and then reboot the system again using the DOS boot disk. At the DOS prompt type *date*—if the year doesn't read 2000, then you have a problem. Don't forget to use the date and time commands to reset the current date and time.

The BIOS setup test

- Enter BIOS setup at boot time (see your PC's documentation) and change the date to December 31, 1999 (12-31-1999). Then change the time to 11:58PM (23:58). Shut down the computer and wait at least two minutes. Restart the system and reenter BIOS setup. Once again, if the year doesn't read 2000, you have a problem. And once again, remember to reset the current date and time—this time using that BIOS setup.

The Windows 95 test

- This test method is a little risky—it may not test true, so use it only if you can't do a test via DOS or BIOS. First, start up your computer in Windows. Then go to the Start menu and select Settings | Control Panel. In the Control Panel Window

double click on the Date | Time icon. Windows will display the Date | Time Properties dialog box. Change the date to December 31, 1999 (12-31-1999) and the time to 11:58PM (23:58). Then click the OK button. Shut down your computer and wait for at least two minutes. Restart the system and return to the Date/Time dialog box. If the year doesn't read 2000, you have a problem. As with the other tests, don't forget to reset the current date and time.

Test programs

If you feel unsure about performing your own Y2K test or if you have a system that won't allow you to do one of the tests we've outlined, you can turn to one of the many test utilities that are now available on the Internet. No matter what your computer or operating system, there's almost certainly a utility that you can download which will both test and fix any Y2K problem you might have. We've provided information about just a few in **Table A**. Most of these programs will conduct a test for free and then require that you register the software and pay for it in order to access that part of the utility which will fix your BIOS clock. Keep in mind that lots of programmers are focused on making money from Y2K, so the prices can be quite high for what the utility does. A little shopping around is in order. You can find more information on Y2K test programs at Yahoo!'s page on this subject.

dir.yahoo.com/Computers_and_Internet/Year_2000_Problem/Software/

Online resources

The Year 2000 Center
www.year2000.com/

PC Magazines' Year 2000 resource center
www.zdnet.com/pcmag/special/y2k/index.html

ZDY2K
www.zdnet.com/zdy2k/

Y2K delivers e-mail alert
www.zdnet.com/pcweek/news/0810/10y2k.html

IBM Y2K support page
www.software.ibm.com/year2000

Yahoo!'s Y2K page
www.yahoo.com/Computers_and_Internet/Year_2000_Problem/

Table A *Y2K test utilities available via the Internet*

Utility	DOS	3.x	95	98	NT	Other	URL
Date-A-Fix	yes	yes	yes	no	no	no	www.date-a-fix.com/
fPrint 2000	yes	no	yes	no	yes	OS/2	www.fprint.co.uk/default.htm
GASP	yes	yes	yes	yes	yes	Mac /OS/2	www.attest-gasp.com
Millennium/Pro	no	no	yes	yes	yes	no	www.unicore.com
Y2K 95 DateTool	yes	no	no	no	no	no	www.micronexus.com.au/
NetKeeper	DOS	no	no	no	no	no	www.multima-corporation.com/
PC FIX 2000	yes	yes	yes	yes	yes	OS/2	www.pcfix2000.com/
Survive 2000	yes	yes	yes	no	yes	Novell, Unix	www.survive-2000.com/corp.htm
PC2000CHECK	yes	yes	yes	no	no	no	www.y2kpcpro.com
Test2000.Exe	yes	no	no	no	no	no	www.rightime.com
Y2K Test&Fix	yes	yes	yes	yes	no	no	www.securenet.org/y2000.html
Y2K Test Utility	yes	no	no	no	no	no	www.firmware.com/
Yes2K v1.0	no	yes	no	no	no	no	www.saidhold.co.za/yes2k.exe
YMark2000	yes	no	no	no	no	no	www.nstl.com/html/ymark_2000.html
HolmesFx	yes	no	no	no	no	no	www.wsnet.com/~designer/holmesfx/

Y2K Tool
www.y2ktool.com/

Usenet Newsgroups:
news: comp.software.year-2000

Small Business Administration
www.sba.gov/y2k/

Special Committee on the Year 2000 Technology Problem
www.senate.gov/committee/y2k.html

U.S. Government's Y2K site
www.y2k.gov/

The year 2000 bug

The year 2000 bug refers to a date-dependency problem that many software programs will experience when the new millennium arrives. Most existing computer software uses only six digits to represent a date, for example, 97-04-01 stands for April 1, 1997—the century date, 1900, is represented by a fixed number. So when January 1, 2000 arrives, many computers will interpret the date as January 1, 1900. The implications for business computer applications is staggering. Dates are often necessary for running important business software computations, for example, calculating credit card bills, mortgage payments, and Social Security benefits all depend on precise dates. The British Computer Society estimates that 80 percent of the world's software programs are affected by the year 2000 bug, and that correcting this problem will cost hundreds of billions of dollars.

If you're a PC user you might be inclined to say, "I can just change the date manually," but the Y2K bug isn't that simple. PCs work with three clocks, the Real Time Clock (RTC), the BIOS (Basic Input/Output System of PC operating systems) clock, and the System clock. The System clock derives time from the RTC by way of the BIOS when the computer boots. So if you reset the System clock and reboot your computer, it will simply defer to the BIOS clock's date.

Tax resources on the Internet

January signals the beginning of tax season. And no matter how good (or bad) you expect your results to be, you'll probably welcome a bit of help to make filing easier and/or improve your bottom line. There are lots of online tax resources to choose from, so we've collected an assortment that we think will be most helpful.

The IRS

First, of course, is the IRS Web site, shown in **Figure A** on page 6. Here, you'll find FAQs (frequently asked questions) covering a wide range of topics, including IRS procedures, collections, filing requirements, information for aliens and US citizens living abroad, and more.

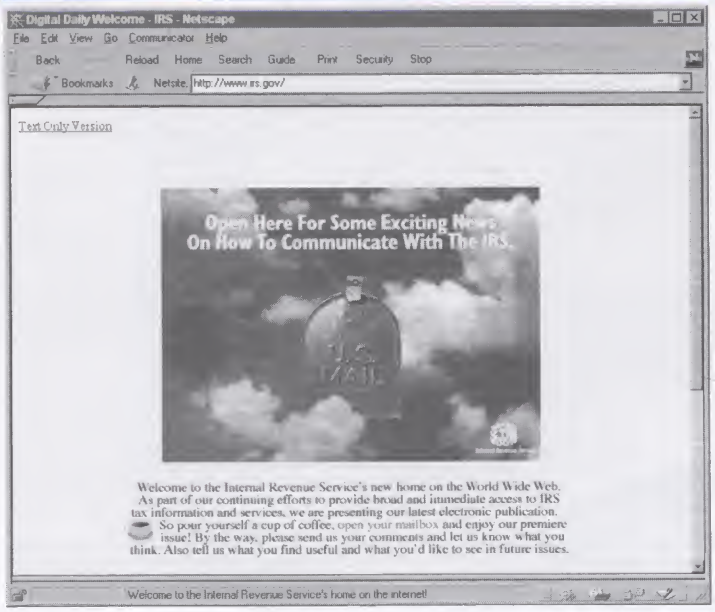
You'll also learn about your rights as a taxpayer. If you're having a problem dealing with the IRS, check out the Office of the Taxpayer Advocate. They try to help taxpayers who have problems which can't be solved through ordinary channels.

The site includes tax forms and a large selection of government publications. You can download anything you want in your choice of formats, including .PDF, .PCL, Postscript, and SGML text. If you're not sure which version you want, the best thing to do is download the .PDF file. Adobe's Acrobat Reader, available for free, will display and print documents in this

format. The IRS provides a link to Acrobat in case you don't already have it. The IRS is located at:

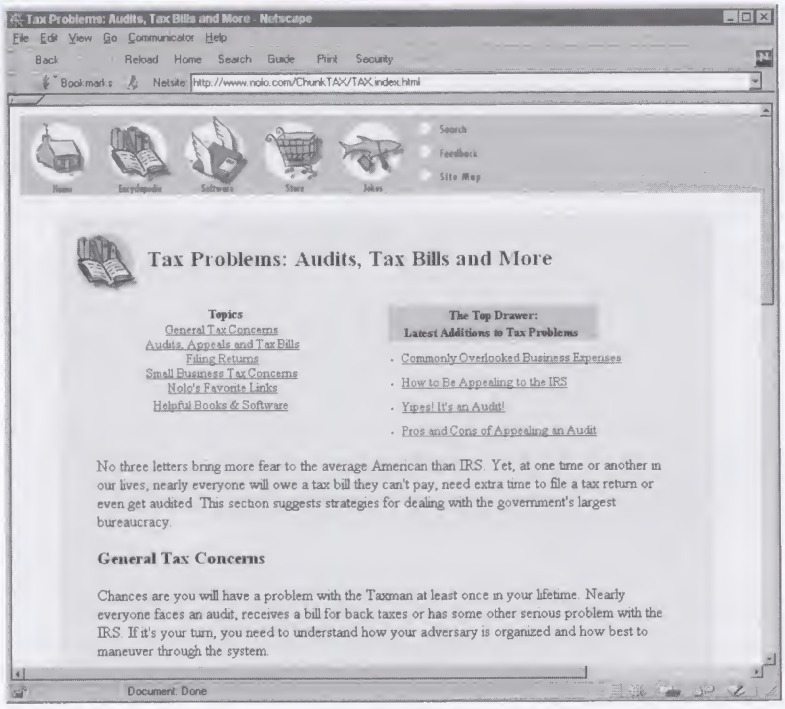
www.irs.gov/

Figure A



Begin your search for tax information at the IRS Web site.

Figure B



Learn how to deal with problems at the Tax Problems: Audits, Tax Bills and more Web site.

Tax Problems: Audits, Tax Bills and more

As an honest taxpayer, you shouldn't encounter any major problems. But, no matter how slim the chances are that you'll become the subject of the next IRS "abuse of power" horror story, it's wise to be prepared. And even the small problems can be very annoying.

The Tax Problems: Audits, Tax Bills and more site, which you can see in **Figure B**, can help you avoid problems. If you run into trouble anyway, it offers advice on how to deal with it. The main thing is to understand what you're up against, and the articles on the site will give you some valuable insights.

The site doesn't just talk about official policies and procedures. It describes the way things actually work on a day-to-day basis. For example, one article looks at the IRS as a bureaucracy and examines the implications of its inefficiencies. Point your browser to:

www.nolo.com/ChunkTAX/TAX.index.html

Tax Help Online

Daniel J. Pilla's Tax Help Online is similar in focus to Tax Problems, but is slanted more toward selling his books than providing an online resource. However, Pilla's not stingy when it comes to putting information online, and you may find some valuable ideas there. Tax Help Online is located at:

www.taxhelponline.com/

Tax Planning Guide

Of course, we don't want to focus entirely on problems. For a good collection of tax tips and strategies, visit Deloitte & Touche's Tax Planning Guide. As **Figure C** shows, their site features tips covering a variety of circumstances, including self-employment and investments. You can find the Tax Planning Guide at:

www.dtonline.com/taxguide97/cover.htm

Intuit

Intuit, publisher of the popular Turbo Tax package, offers not only software, but tax help as well. On their Web site, you'll find

personal and small business tax guides, with information on topics ranging from taking a loss on the sale of a residence to home office deductions.

The site also features a searchable database of tax professionals. Just tell it where you are and what services you need, and the search engine will return a list of professionals who should be able to help you. All this and more is available at:

www.intuit.com

U.S. Tax Code online

The entire United States Internal Revenue Code is on the Web, giving you quick and easy access to it. Although the average person will usually prefer plain English explanations, there may be situations in which you'll need to go directly to the source itself.

There are several methods you can use to find the exact information you're looking for. You can go through the table of contents or the index of section numbers. The latter is useful if you're looking up a citation from another source. The site also features a search engine if you want to conduct a keyword search. The Tax Code is located at:

www.fourmilab.ch/ustax/ustax.html

Discussion

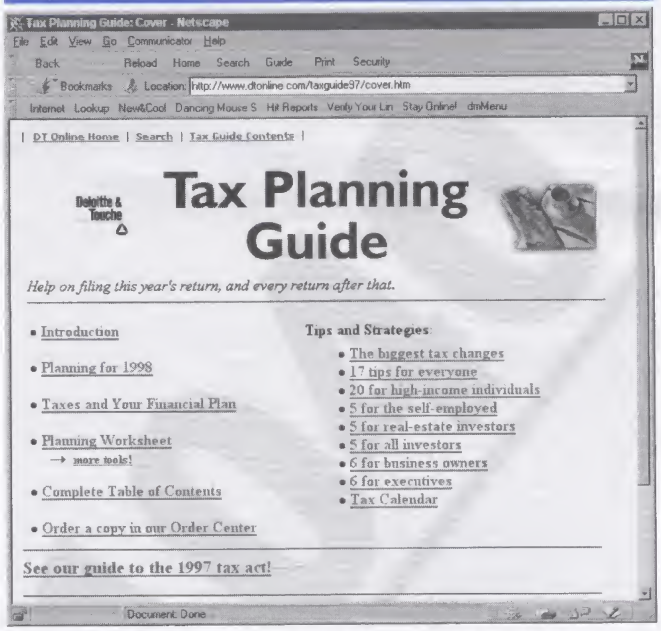
So far, we've only looked up information. But, that's not always good enough. What if you have an unusual problem? What if you need advice about something that comes down to a judgment call? What if you've looked up information but don't understand it? It'll be helpful if you can discuss the situation with someone.

In this case, you'll want to fire up your newsreader and check out the newsgroup misc.taxes.moderated. Among the regulars, you'll find an assortment of people who work as tax professionals in various capacities, and they should be able to help with just about anything you would need to ask.

Electronic filing

With the increasing popularity of electronic filing, a number of companies have appeared on the Web to provide the service. They claim several benefits over traditional

Figure C



Deloitte & Touche can help you with tax planning strategies.

paper filing, including greater accuracy and quicker delivery of your refund.

The usual method is for you to download the software the service provides and enter the necessary information. Then, upload the results to the service, which will forward it to the IRS.

The process isn't entirely paper-free; you'll also need to file a Form 8453-OL and attach any W-2 or 1099 forms you have. The 8453-OL is a one-page form that summarizes your return, lets you set up a direct deposit for your refund (optional), and asks for your signature.

Two of the more well-established electronic filing companies are Nelco Tax Wizard and QuickFile USA. You can find their sites at, respectively:

www.qfileusa.com/

and

www.filetaxes.com/

If you want to shop around, the IRS Web site includes links to several electronic filing services. These links are located at:

www.irs.ustreas.gov/prod/elec_svs/ol-txpyr.html#Soft

Creating your own USENET newsgroup

There are, according to some estimates, more than 15,000 well-documented USENET newsgroups that you can currently post to on the Internet. Newsgroups serve as electronic meeting places for public discussion of a particular topic or subject. Much like email, newsgroups allow you to read and post messages (also known as articles or postings) to a bulletin board area. Most public newsgroups are managed by USENET—a distributed bulletin board system that originated at Duke University in 1979-80, and which includes almost all public newsgroups.

USENET operates much differently than the World Wide Web. It collects newsgroup messages and automatically distributes them at periodic intervals among news servers throughout the systems. This distribution process gives USENET one distinct advantage over the Web—information is distributed from many Internet sites instead of one, making access problems less likely.

If you're familiar with USENET then there's a good chance that you count on one or more newsgroups for information that's important to you. With 15,000 plus topic groups, the odds are that you'll find a newsgroup that covers your needs, but what can you do if a topic you're interested in isn't covered by a USENET newsgroup? You can create your own newsgroup.

The first step: research

If you're interested in creating your own newsgroup, you'll need to do some basic research to determine your topic's usefulness. In most cases any topic you want to discuss will already be covered, so you need to do a thorough search on it before you try to create a newsgroup.

First review the major USENET Newsgroup hierarchies. There might be a hierarchy topic that you've missed. For example, you can find newsgroups about computers in both the sci (applied sciences) and comp (computer topics) groups. The Newsgroup names sidebar explains how newsgroup hierarchy names work and will give you an idea how to search by newsgroup topic.

If you don't locate your topic on this opening search, you still have work to do. Go to the Tile.net search engine located at:

www.tile.net/

and do a newsgroup search on it. At Tile.net you can search your topic by newsgroup hierarchy, description, or alphabetical index. You might also want to visit the two newsgroup search engines dejanews (www.dejanews.com/) and Reference.COM (WWW.Reference.COM/) and see what kind of newsgroups come up in response to a search on your topic's keywords.

After conducting you initial searches you might also want to review the full list of newsgroups in your newsgroup reader. This may seem like a lot of work, but remember, if you propose a newsgroup that is already in existence, there are hundreds of people who will have to waste time reading your proposal.

The creative process

Once you determine that your newsgroup topic isn't already covered by another USENET newsgroup, you'll need to read the following newsgroups.

news.announce.newsgroups
news.groups
news.config

These newsgroups are set up for people who are discussing new group topics or proposing new newsgroups to the "Big 8" (biz, comp, mis, news, rec, sci, soc, talk). It's possible that the topic you're considering is currently being discussed in one of these newsgroups, or that the topic was recently considered and rejected. After you've done this final research you're ready for the next step.

Make a Request for Discussion (RFD), like the one shown in **Figure A**, to news.announce.newsgroups. Include a full outline of your newsgroup topic in the RFD including a proposed group name, subject matter, level of discussion, and

whether the group will be moderated or not (we discuss moderation later in this article). You may want to review some previously posted RFDs so you can get a better idea of the content required.

Pay close attention to the discussion that follows your RFD. Other readers will make suggestions about the newsgroups subject matter, name, group category, and other possible problems concerning your proposed topic. Answer any questions as thoroughly as you can. Discussion of your proposed group can take as long as a month, but if your topic survives this process without being dismissed, you're ready for the next step.

Post a Call for Votes (CFV) to news.announce.newsgroups. One of the readers will be nominated to tally the votes submitted and will announce the results in a few weeks. For your newsgroup to pass this test it will need a 2/3 ratio with a margin of at least 100 plus Yes votes over No votes. If your newsgroup fails the vote, you shouldn't try to resubmit it for at least six months. If your newsgroup passes the vote, you'll need to contact your IPS or site administrator

Explain that you couldn't find a newsgroup on your topic and that you did the research and went through the process of a RFD and CFV in news.announce.newsgroups. Then ask if he will work with you to send out a control message to news servers that will "newsgroup" your topic. Many newsgroup servers will automatically add your newsgroup to their standard list, others will review your proposed topic and may decide not to carry your group.

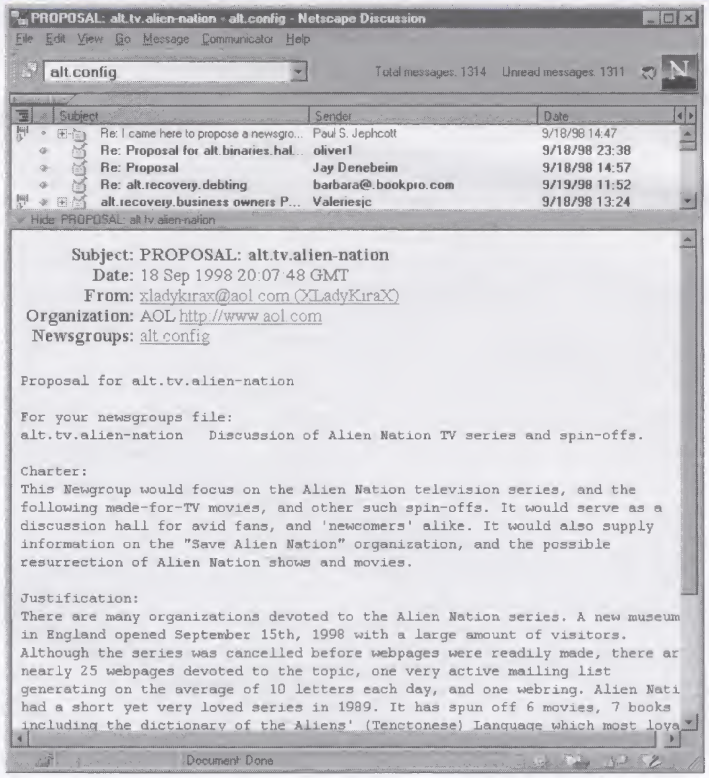
ALT newsgroup creation

ALT is generally thought to stand for alternative, but according to some it really stands for "Anarchist, Lunatics, and Terrorist." As you might infer from that definition, an ALT newsgroup is much easier to create and can include almost anything. The process here is much less formal and all takes place in the newsgroup:

alt.config

Although the process is more relaxed, you should still do your research, make an RFD and CFV, which will save you, and others lots of time.

Figure A



After your initial research you'll need to propose a Request for Discussion on your newsgroup topic.

ITS ALIVE! What now?

Once your newsgroup is established there are still important tasks left to do. For example, you might want to make documents explaining the groups purpose, or an FAQ available to readers.

If you're moderating your newsgroup you'll have plenty to do. Since newsgroups are built on such a widely distributed system, they are open to opinions from many readers, some of which may be inappropriate to your newsgroup topic. In addition, spamming is a common problem among newsgroups. If these problems become prevalent, moderating your newsgroup may become overwhelming. In this case, you may want to consider moderation robot which you can configure to screen for duplicate messages, a known poster, words, phrases, inappropriate cross-postings, and similar problems. A good example of these programs is the S.T.U.M.P. Robomoderator Program, which you can find out more about at:

www.algebra.com/~ichudov/stump/

Additional resources

news.announce.newgroups resources
tile.net/news/newsannouncenewgroups.html

Moderated Newsgroups FAQ
www.cis.ohio-state.edu/hypertext/faq/usenet/usenet/moderated-ng-faq/faq.html

news.groups resources
tile.net/news/newsgroups.html

How to create an ALT newsgroup
www4.ncsu.edu/unity/users/a/asdamick/www/news/create.html

news.answers
news:news.answers

Newsgroup Names

Newsgroups are organized by subject and each newsgroup has a unique name intended to reflect the topic of discussion. Newsgroup names are separated by periods and some words specify categories which make up the newsgroup's URL (Uniform Resource Locator). Newsgroup URLs are formatted similarly, but not identically, to Web pages. For example, the URL news:alt.movies.hitchcock specifies the server protocol news: and the newsgroup alt.movies.hitchcock. Unlike other Internet connections, the URL doesn't need a server and path name with preceding slashes because UseNet is accessed from a news host instead of an individual Internet site.

Understanding newsgroup category types can help you find the newsgroup you're after. Some of the major newsgroup categories types are shown in Table A.

Table A: *You can often determine a newsgroup's general content by looking at the hierarchy name.*

Name	Description
alt	Alternative - discussion on various topics
biz	Business advertising
comp	Computer topics
mis	Miscellanies topics
news	Information about Usenet
rec	Recreational (sports, games)
sci	Applied sciences
soc	Social and cultural topics
talk	Discussion of controversial topics
Clari	ClariNet commercial news service
ieee	Institute of Electrical and Electronic Engineers
k12	Newsgroups for teachers

The Internet freebie roundup

By now, you know there are lots of Web sites where you can find free stuff—email accounts, Java applets, Web page graphics, and so on. But you may not know that you can also find a generous amount of free stuff on the Web.

Yes, you guessed it. We're talking about product samples and promotional items. Okay, so you're not going to get anything truly valuable just by asking for it. But samples are a good way to try new brands of personal and household products. And promotional items can often be useful. If you need to replace your mouse pad and don't care about the design, why pay $10 or more for a new one when there are dozens of companies that'll be happy to send you a free one with their logo on it?

Some companies only need a postal address to send your free item to. But, in some cases, you'll have to fill out a survey, which presumably helps them plan their marketing strategies. If you feel the questions are too intrusive, chances are very good that someone else is giving away a comparable item without being so nosy.

This also leads into the area of privacy. Even the most optimistic observer has to

admit that there are unethical companies on the Web. If you give the Imperial Widget Company your email address, how do you know they won't sell it to spammers?

Possibly the best solution is to get an account at a free email service and give that address to Web sites you're not certain about. If the account starts receiving too much spam, simply move to a new one.

Finding freebies

With all that out of the way, it's time to get down to business and find some freebies. As you'd expect, a number of people have taken up the task of finding sites that offer free stuff and compiling lists of links. Here are a few of the more comprehensive lists.

4FreeStuff

The 4FreeStuff site gives you links to a generous selection of product samples, including a pre-launch offer for creme Life Savers. You'll also be able to get Jelly Belly jelly beans, Pearl Drops toothpaste, and Kellogg's Smart Start cereal. If you're looking for reading material, check out the trial issues of various popular magazines. You can find 4FreeStuff, whose home page is shown in **Figure A**, at:

www.4freestuff.com/

Free Mania

Free Mania's links will hook you up with samples of cosmetics, food, and health products. You can also find free T-shirts, hats, pins, and mouse pads. Free Mania's home page, which you can see in **Figure B**, is located at:

www.freemania.net/

Simple Life Corporation

The Fun Page of Free Stuff is a small part of a larger Web site, but the Simple Life Corporation has assembled a very good collection of links. You'll be able to request free apparel, samples of cosmetics, posters, mouse pads, and more. Just point your browser to:

members.aol.com/simplfe/free.html

The Free Site

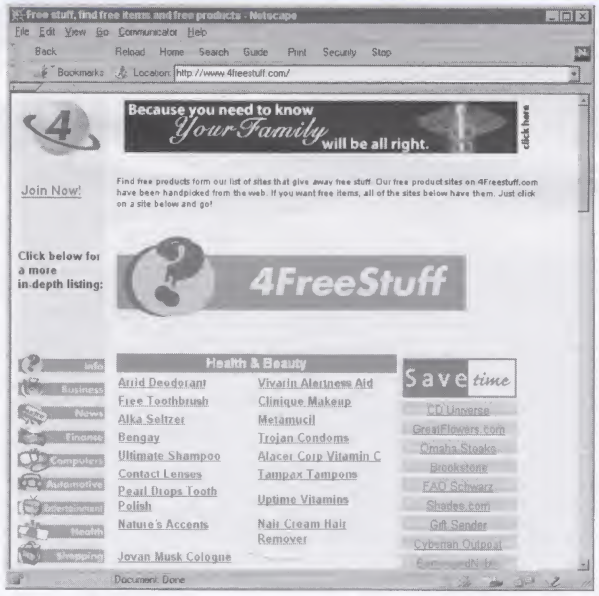
The Free Site focuses on Internet-related free stuff, but if you click on the Free Samples link, you'll find a lot of products to try. Choices range from Exedrin and Ben Gay to a selection of Avon products, Certs, and more. You'll find The Free Site, shown in **Figure C**, at:

www.thefreesite.com/

Freeland

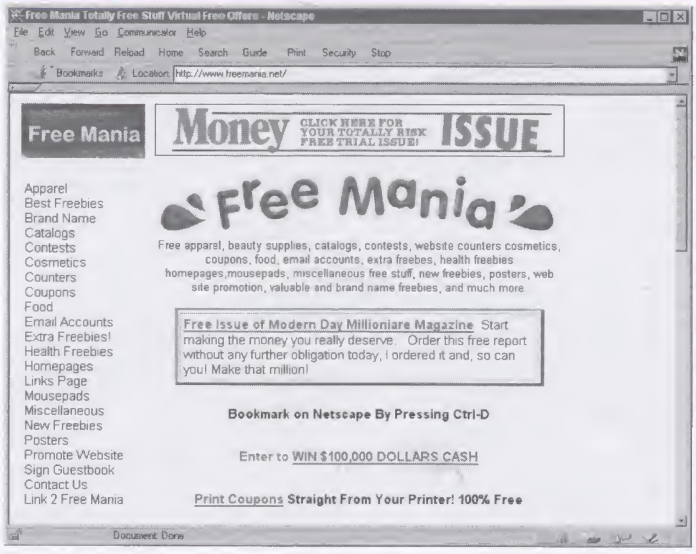
The bad news is: the links on this site are hard to read against the background. The good news is: the sheer size of Freeland's

Figure A



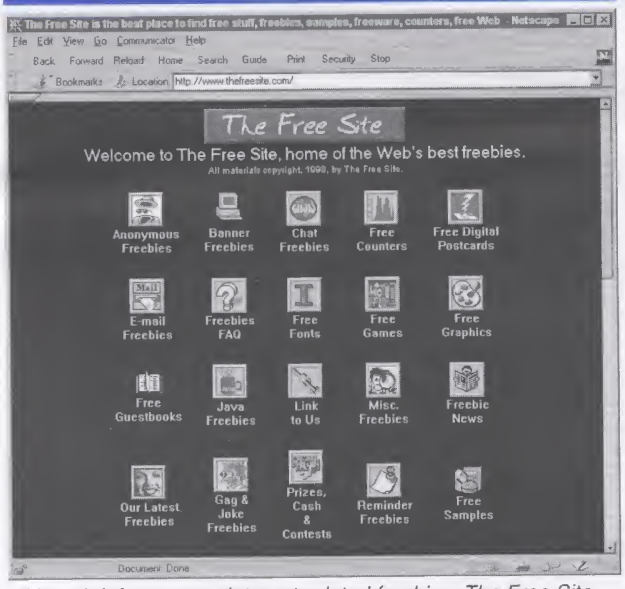
You can find a generous selection of free product samples at 4FreeStuff.

Figure B



Free Mania will link you to product samples and other freebies.

Figure C



Although it focuses on Internet-related freebies, The Free Site also includes links to consumer freebies.

list redeems this site. Along with the expected selection of posters, stickers, books, food, and apparel, the site lists more distinctive items such as carpet samples, party favors, fishing flies, and even bullets. Point your browser to:

come.to/freeland

The Rebate Company

Although it doesn't fit into the category of freebies, The Rebate Company is worth mentioning here. You can order consumer electronic items such as television sets, camcorders, telephones, and personal cassette players at this Web site. Each item comes with a rebate coupon, which will always result in a deep discount and sometimes offset the entire cost of the item. You can go shopping for rebates at:

www.rebateco.com/

X-Ray Vision

Those flashy Web technologies do a lot more than simply dazzle visitors. They cause a lot of people to worry about security.

The dangers may be real, imagined, or real but exaggerated, in the mind of the user. They can range from a suspicion that someone—probably a marketer—is tracking your every movement on the Web to the fear that hackers can steal your credit card numbers.

One solution is to keep up with all the new developments, read as much information as you can find, make sure you understand the capabilities of each technology, form your own opinion about the dangers, and take appropriate defensive measures. But that's too much for most of us to handle.

An alternative is simply to turn off Java and JavaScript, refuse all cookies, don't install any plugins, and just surf sites that use text and static pictures. But then, you'll miss out on a lot of good stuff that presents no danger.

The middle ground is to try to filter out what you don't want, while keeping as much of the good stuff as possible. And X-Ray Vision, from Intracept, is just the tool for the job. It intercepts data going to your browser, identifies downloadable technologies such as cookie requests, scripting languages, ActiveX, and server push and pull commands. You can find Intracept's home page at:

www.intracept.com

Using X-Ray Vision

X-Ray Vision inserts a little spiral-shaped icon somewhere near the top of each Web page you visit. **Figure A** shows the "snoop" page from Anonymizer's Web site. This page gives a harmless demonstration of the information Web sites can collect. The X-Ray Vision icon is between the "script form" and "stay connected" warnings. (By default, these warnings don't appear; we enabled them merely for the sake of illustration.)

Click on the icon to get a report showing all the downloadable technologies the program found on the page. **Figure B** shows the report for the Anonymizer demo. As you can see, it uses a "Keep Alive" command, which allows a page to continue transmitting data

to your browser after the page has finished loading.

X-Ray Vision also found JavaScript and a JavaScript submit form command on this page. The latter is a technique to automatically submit form data. A look at the source code for this page revealed a form that doesn't show up on the page, and it used a "mailto" action. This could have been an attempt to learn the visitor's email address.

On the report page, click on "Default Permissions," to set Basic and Advanced Default Permissions. This report gives you a number of options for dealing with cookies and other downloadable technologies.

Of course, you can override the default permissions for individual Web sites. If you feel particularly cautious, you could disable everything by default, then enable options only for sites you know you can trust.

X-Ray Vision also puts its icon in your system tray. Simply right-click on it to get the pop-up menu.

Here, you can enable and disable scanning, as well as the eye icon on Web pages. If you want to turn the warning graphics at the top of **Figure A** on or off, you'll have to click on the Web page eye icon and go to the Basic Default Permissions.

Notes

X-Ray Vision seems to do a very good job of scanning pages for possible dangers. Since the user can toggle the graphics it inserts on and off on the fly, it doesn't have to interfere with the layout of Web pages.

However, we noticed that Netscape seems to crash a little more often than normal when X-Ray Vision is scanning. When this happens, you can invoke the pop-up menu, disable scanning, and restart Netscape. Hit [Ctrl]H to get the History screen, and your most recent page should be at the top of the list. Double-click to return there.

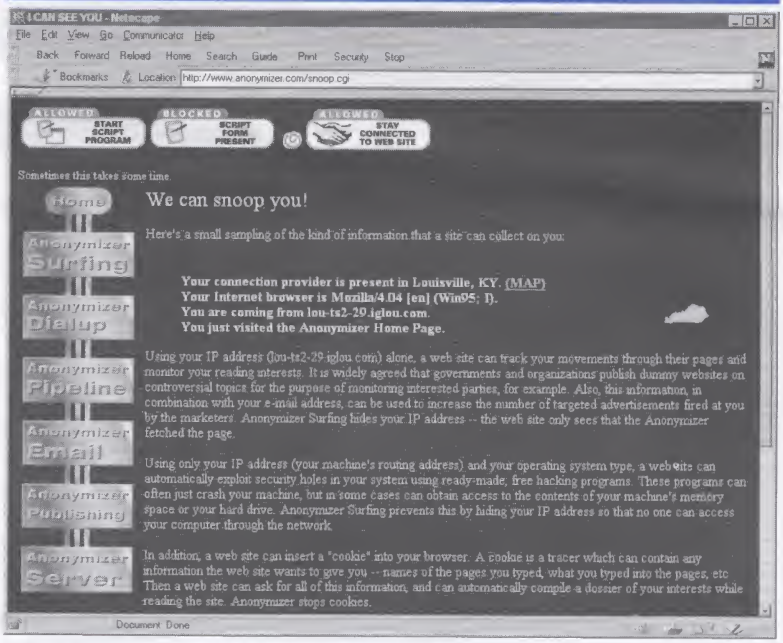
This can be an annoyance, but it doesn't happen all that much, and many users may consider it an acceptable trade-off for the increased security.

System requirements and pricing

X-Ray Vision runs on Windows 95/98 systems with Netscape Navigator 2.2 or higher and with Microsoft Internet Explorer 3.0 or higher. Intracept's Web site notes that if you have both browsers, it'll work with the one you've designated as your default browser. The program works with AOL connections, but not with CompuServe or Prodigy.

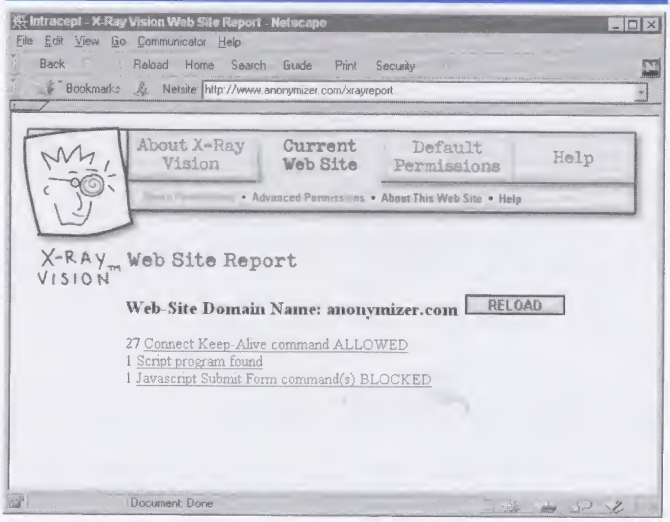
A 15-day free trail version is available for download. If you want to buy it, it will cost you $29.00.

Figure A



X-Ray Vision can detect a variety of so-called "downloadable technologies" on Web pages.

Figure B



The report for Anonymizer gives you a list of tehcnologies that can be potential security threats.

Web Fanatic: HotMailer98

by Buzz Webster
Some like it Hot!

Have you ever thought about HotMail? You know, that Web based email service that lets you access and send email messages from a Web page form. It's cool. The HotMail Web site is located at:

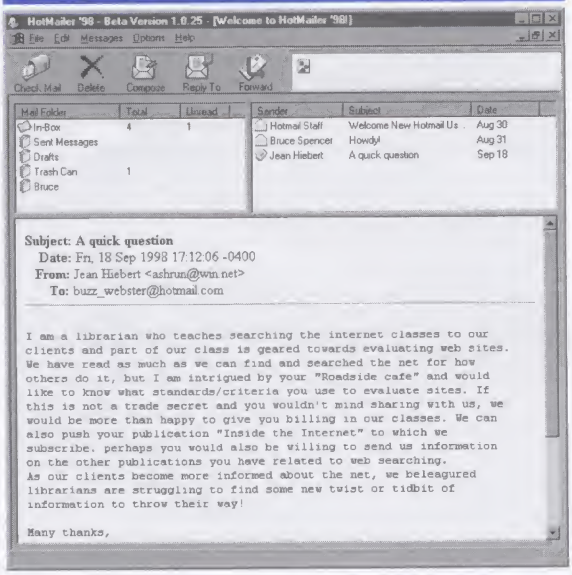
www.hotmail.com/

The great thing about HotMail is that you can go to any computer with Internet access and read or send your HotMail email messages. That's smart, but there's a catch. When you access email from home, you still have to use that Web page form—it's a little slow because you have to call up a new Web page for each message. There's a second catch: if you've got another email account (a POP3) then you have to have a second email application to access it. This all boils down to a paradox: HotMail is a great email service that can be a major pain. That is, until now.

The HotMailer98 application, shown in **Figure A**, integrates the HotMail service into an email program. HotMailer98 lets you enter your HotMail login name and password directly from your desktop. Then you can read, compose, and send email from your HotMail account, with the HotMailer98 application. The program includes the standard email folders: in-box, sent messages, drafts, and trash, but you can also manage email messages by creating new folders and moving messages between folders. Nice huh? HotMailer98 also includes standard email application features like an address book and signature file. And you can create new HotMail accounts right from your desktop.

All right! This is great, right? This gives you the control over your HotMail account that you've always wanted, right? But you know me! One feature is not enough. Remember your other POP3 accounts? HotMailer98's Pop Mail Settings dialog box, shown in **Figure B**, lets you configure it to access up to four POP3 accounts, color code them for quick recognition, and automatically connect to your POP3 server once a minute to check for new email. So you can you have your cake, and eat it too!

Figure A



HotMailer98 lets you access your HotMail email account without using a Web page.

Figure B

You can also use the Pop Mail Settings dialog box to configure HotMailer98 to access POP3 email accounts!

Bottom line

HotMailer98 is available for Windows 95, 98, or NT. One more thing. Big smile, BIG SMILE! IT'S FREE! You can download a copy from the HotMailer98 Web site, which is located at:

www.hotmailer98.com/

The only other requirement for using HotMailer98 is that you have Microsoft Internet Explorer 4.0 on your computer, but that's no problem, because it's free too!

Site of the month: The Year 2000 Center

The trouble with our times is that the future is not what it use to be.
Paul Valery
French Poet

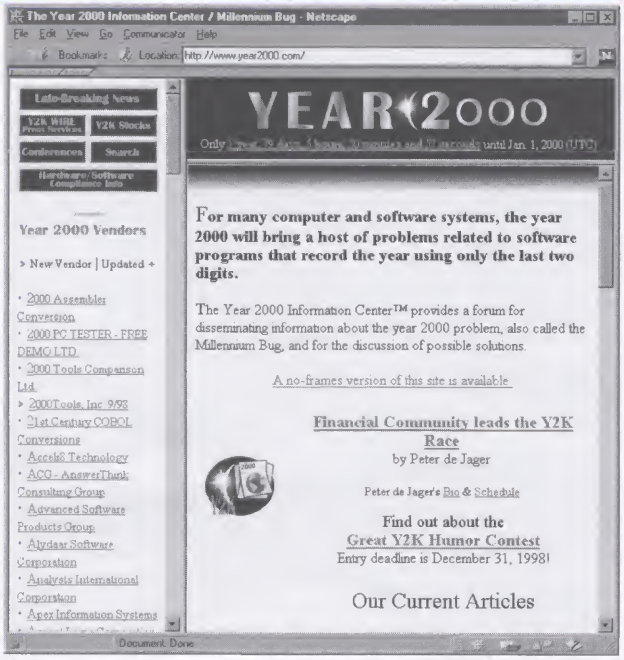
The clock ticks and disaster creeps ever closer. In a little less than one year, the year 2000 will catch many computer users off-guard when their computers try to deal with a date for which they weren't programmed. If you're concerned about what the year 2000 will do to your computer, we have the site you need to visit. Our *Inside the Internet* site of the month for January is The Year 2000 Center, another example of the best the Internet has to offer.

The Year 2000 Center

The Year 2000 Center Web site, shown in Figure A, is a forum for sharing information and solutions about the year 2000 bug. If you don't know what the year 2000 problem is, see the sidebar, *The year 2000 bug*. The site provides archives of articles, press releases, a Year 2000 FAQ, and links to user groups and other related sites that are focusing on this problem. In addition you'll find current news articles, information on Year 2000 conferences, and a search engine that lets you query the Year 2000 Center Web site. The site also includes a comprehensive hotlist of more than 110 vendors that are designing software to solve this unusual computer problem. The Year 2000 Center Web site is located at:

www.year2000.com/

Figure A



At the Year 2000 Center Web site you can get information on the year 2000 problem and link to related vendor sites.

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Roadside café

Each month, we'll let you know about Web sites that have attractive interfaces, feature valuable resources, or are just good examples of effective Web sites. If you know of or work for a Web site that you think would be of interest to our readers, please let us know about it. You can contact the Editor at **int@zdjournals.com**.

Computers: history and development

Many consider the abacus, which was invented 5,000 years ago in Asia Minor, to be the first computer. This Web site covers the history of early computing machines, such as the abacus, and "the five ages" of the computer. The site also takes full advantage of hypertext links, connecting to further information on 17th, 18th, 19th century thinkers like Blaise Pascal (1623-1662), Charles Babbage (1791-1871), Herman Hollerith (1860-1929), and George Boole (1815-1864) who's work made the modern computer possible. You can read about the history of computers at:

www.digitalcentury.com/encyclo/update/comp_hd.html

The Internet archive

The Internet's history parallels oral history—it is, for the most part being handed down by word of mouth, and not recorded. The Internet archive is working in affiliation with the Smithsonian to collect and store public Internet content such as Web pages, news, and download software, which will be archived to provide historians, researchers, scholars, and future generations of Internet users a history of the Internet. The archive will contain terabytes of information. You can read more about the Internet Archive at:

www.archive.org/

Hobbes' Internet Timeline

In this Web document Robert H. Zakon traces the history of the Internet from the event that inspired it (the 1957 USSR launch of Sputnik) to present day events. The timeline includes major events in the Internet's development, links that lead to more information, and graphics that help you track the Internet's growth. You can read Hobbes' Internet Timeline at:

info.isoc.org/guest/zakon/Internet/History/HIT.html

The Web Fanatic's Internet Timeline

Our own Buzz Webster has developed a timeline (inspired by Hobbes' Timeline) to track the history of the Internet. But unlike the Hobbes' Timeline, which starts in 1957, Buzz begins his timeline in the year 25,000 BC. The Web Fanatic's Internet Timeline includes lots of early computing, networking, and communications events, like the first high-speed optical data transmission that was sent 375 miles across the Aegean sea from Troy to Mycenae announcing the fall of Troy in 1184BC, and the coining of the word Cybernétique, byAndré-Marie Ampère (French eletrodynamicist) in 1843! The Web Fanatic's Internet Timeline is located at:

www.zdjournals.com/webfan/time/

Hacker Historical Shrine

There is a dark but fascinating history that is also associated with the Internet, the world of hackers, crackers, and phreakers. This Web site breaks hacking down into five time periods, hacker prehistory (before 1969), The Elder Days (1970 - 1979), The Golden Age of Hacking (1980 - 1989), The Great Hacker War (1990 - 1994), and Zero Tolerance (1994 - Present). The site also includes a copy of the well known document *A Brief History of Hackerdom*, as well as a Hacker Historical Timeline that begins in 1928. You can delve into the history of hacking at:

www.thefuturesite.com/catman/history/